

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions,
and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A steel tube for reinforcing a automobile door, having a composition comprising:

0.05 to 0.22 mass % of C;

0.01 to 2.0 mass % of Si;

2.5 to 3.5 mass % of Mn;

0.005 to 0.10 mass % of Al; and

the remainder as Fe and unavoidable impurities,

wherein the steel tube has tensile strength of no less than 1000 MPa and ~~no more than 1400 MPa~~ has an absorbed energy before buckling of at least 1160 E(J) and is excellent in three-point-bending property.

2. (original) A steel tube for reinforcing a automobile door according to claim 1, wherein the steel tube has a structure which is constituted of martensite and/or bainite, and the martensite and/or bainite is a transformation product obtained as a result of transformation of a deformed austenite.

3. (original) A steel tube for reinforcing a automobile door according to claim 1, wherein the steel tube has a structure which is a mixture of martensite and/or bainite and ferrite, and

the martensite and/or bainite is a transformation product obtained as a result of transformation of a deformed austenite.

4. (original) A steel tube for reinforcing a automobile door according to claim 3, wherein the content of ferrite, expressed as the area ratio, is no more than 20 %.

5. (previously presented) A steel tube for reinforcing a automobile door according to claim 1, wherein the yield ratio of the steel tube is no larger than 80 %.

6. (previously presented) A steel tube for reinforcing a automobile door of any according to claim 1, wherein the steel tube has at least one composition selected from the group consisting of composition A, composition B and composition C described below, in addition to the aforementioned composition:

Composition A: at least one type of element selected from the group consisting of: no more than 1 mass % of Cu; no more than 1 mass % of Ni; from 0 mass % to no more than 0.5 mass % of Cr; and no more than 1 mass % of Mo.

Composition B: at least one type of element selected from the group consisting of: no more than 0.1 mass % of Nb; no more than 0.5 mass % of V; no more than 0.2 mass % of Ti; and no more than 0.003 mass % of B.

Composition C: at least one selected from the group consisting of: no more than 0.02 mass % of REM; and no more than 0.01 mass % of Ca.

7. (currently amended) A method of producing a steel tube for reinforcing [[a]] an automobile door, comprising the steps of:

preparing a mother steel tube having a composition which includes: 0.05 to 0.22 mass % of C; 0.01 to 2.0 mass % of Si; 2.5 to 3.5 mass % of Mn; 0.005 to 0.10 mass % of Al; and the remainder as Fe and unavoidable impurities;

subjecting the mother steel tube to a heating or soaking treatment; and

thereafter, subjecting the mother steel tube to a diameter-reducing rolling process in which the total diameter-reduction rate is no less than 20 % and the temperature at which the diameter-reducing rolling process is finished is ~~no higher than 800 °C~~ 750 °C or less to provide a finished steel tube with a tensile strength of at least 1000 MPa ~~and no more than 1400 MPa~~.

8. (previously presented) A method of producing a steel tube for reinforcing a automobile door according to claim 7, wherein the steel tube has at least one composition selected from the group consisting of composition A, composition B and composition C described below, in addition to the aforementioned composition:

Composition A: at least one type of element selected from the group consisting of: no more than 1 mass % of Cu; no more than 1 mass % of Ni; from 0 mass % to no more than 0.5 mass % of Cr; and no more than 1 mass % of Mo.

Composition B: at least one type of element selected from the group consisting of: no more than 0.1 mass % of Nb; 0.5 mass % of V; no more than 0.2 mass % of Ti; and no more than 0.003 mass % of B.

Composition C: at least one selected from the group consisting of: no more than 0.02 mass % of REM; and 0.01 mass % of Ca.

9. (new) The method of claim 7, wherein the produced steel tube has an absorbed energy before buckling of at least 1160 E(J).